

**ENTERED**

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RAW SEQUENCE LISTING

DATE: 03/01/2002

PATENT APPLICATION: US/10/073,377

TIME: 10:56:57

Input Set : A:\EP.txt

Output Set: N:\CRF3\03012002\J073377.raw

```

3 <110> APPLICANT: Hobom, Gert
4   Menke, Annette
6 <120> TITLE OF INVENTION: Influenza Viruses with Enhanced Transcriptional and
7   Replicative Capacities
9 <130> FILE REFERENCE: 010293us/JH/ml
C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/073,377
C--> 12 <141> CURRENT FILING DATE: 2002-02-08
14 <160> NUMBER OF SEQ ID NOS: 47
16 <170> SOFTWARE: PatentIn Ver. 2.1
19 <210> SEQ ID NO: 1
20 <211> LENGTH: 12
21 <212> TYPE: RNA
22 <213> ORGANISM: Influenza A virus
24 <400> SEQUENCE: 1
25 ccugcuuuug cu                                     12
28 <210> SEQ ID NO: 2
29 <211> LENGTH: 12
30 <212> TYPE: RNA
31 <213> ORGANISM: Influenza B virus
33 <220> FEATURE:
34 <221> NAME/KEY: misc_feature
35 <222> LOCATION: (1)..(2)
36 <223> OTHER INFORMATION: n = any nucleotide
38 <400> SEQUENCE: 2
W--> 39 nnygcuuucug cu                                 12
42 <210> SEQ ID NO: 3
43 <211> LENGTH: 12
44 <212> TYPE: RNA
45 <213> ORGANISM: Influenza C virus
47 <400> SEQUENCE: 3
48 ccugcuuucug cu                                     12
51 <210> SEQ ID NO: 4
52 <211> LENGTH: 12
53 <212> TYPE: RNA
54 <213> ORGANISM: Artificial Sequence
56 <220> FEATURE:
57 <223> OTHER INFORMATION: Description of Artificial Sequence: Modified
58   influenza A 3'-sequence
60 <400> SEQUENCE: 4
61 ccuguuuuuua cu                                     12
64 <210> SEQ ID NO: 5
65 <211> LENGTH: 12
66 <212> TYPE: RNA

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67 <213> ORGANISM: Artificial Sequence
69 <220> FEATURE:
70 <223> OTHER INFORMATION: Description of Artificial Sequence: Modified
71     influenza A 3'-sequence
73 <400> SEQUENCE: 5
74 ccuguuucua cu                                     12
77 <210> SEQ ID NO: 6
78 <211> LENGTH: 12
79 <212> TYPE: RNA
80 <213> ORGANISM: Artificial Sequence
82 <220> FEATURE:
83 <223> OTHER INFORMATION: Description of Artificial Sequence: Modified
84     influenza A 3'-sequence
86 <400> SEQUENCE: 6
87 ccugguucuc cu                                     12
90 <210> SEQ ID NO: 7
91 <211> LENGTH: 13
92 <212> TYPE: RNA
93 <213> ORGANISM: Influenza A virus
95 <400> SEQUENCE: 7
96 aguagaaaca agg                                     13
99 <210> SEQ ID NO: 8
100 <211> LENGTH: 13
101 <212> TYPE: RNA
102 <213> ORGANISM: Influenza B virus
104 <220> FEATURE:
105 <221> NAME/KEY: misc_feature
106 <222> LOCATION: (12)..(13)
107 <223> OTHER INFORMATION: n = any nucleotide
109 <400> SEQUENCE: 8
W--> 110 aguagwaaca rnn                                13
113 <210> SEQ ID NO: 9
114 <211> LENGTH: 13
115 <212> TYPE: RNA
116 <213> ORGANISM: Influenza C virus
118 <400> SEQUENCE: 9
119 agcaguagca agr                                    13
122 <210> SEQ ID NO: 10
123 <211> LENGTH: 13
124 <212> TYPE: RNA
125 <213> ORGANISM: Artificial Sequence
127 <220> FEATURE:
128 <223> OTHER INFORMATION: Description of Artificial Sequence: Modified
129     influenza A 5'-sequence
131 <400> SEQUENCE: 10
132 agaagaaauca agg                                    13
136 <210> SEQ ID NO: 11
137 <211> LENGTH: 21
138 <212> TYPE: RNA

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139 <213> ORGANISM: Influenza A virus
141 <220> FEATURE:
142 <221> NAME/KEY: misc_feature
143 <222> LOCATION: (14)..(16)
144 <223> OTHER INFORMATION: n = any nucleotide
146 <400> SEQUENCE: 11
W--> 147 aguagaaaca aggnnnuuuu u 21
150 <210> SEQ ID NO: 12
151 <211> LENGTH: 21
152 <212> TYPE: RNA
153 <213> ORGANISM: Artificial Sequence
155 <220> FEATURE:
156 <223> OTHER INFORMATION: Description of Artificial Sequence: Modified
157     influenza A 5'-sequence (pHL1920)
159 <220> FEATURE:
160 <221> NAME/KEY: misc_feature
161 <222> LOCATION: (14)..(16)
162 <223> OTHER INFORMATION: n = any nucleotide
164 <400> SEQUENCE: 12
W--> 165 agaagaauca aggnnnuuuu u 21
168 <210> SEQ ID NO: 13
169 <211> LENGTH: 21
170 <212> TYPE: RNA
171 <213> ORGANISM: Influenza B virus
173 <220> FEATURE:
174 <221> NAME/KEY: misc_feature
175 <222> LOCATION: (12)..(16)
176 <223> OTHER INFORMATION: n = any nucleotide
178 <400> SEQUENCE: 13
W--> 179 aguagwaaca rnnnnuuuuu u 21
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183 <211> LENGTH: 19
184 <212> TYPE: RNA
185 <213> ORGANISM: Artificial Sequence
187 <220> FEATURE:
188 <223> OTHER INFORMATION: Description of Artificial Sequence: Modified
189     influenza C 5'-sequence
191 <400> SEQUENCE: 14
192 aguaguaaca agrguuuuu 19
195 <210> SEQ ID NO: 15
196 <211> LENGTH: 15
197 <212> TYPE: RNA
198 <213> ORGANISM: Artificial Sequence
200 <220> FEATURE:
201 <223> OTHER INFORMATION: Description of Artificial Sequence: Modified
202     influenza A 3'-sequence (pHL1102)
204 <220> FEATURE:
205 <221> NAME/KEY: misc_feature
206 <222> LOCATION: (1)..(3)

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207 <223> OTHER INFORMATION: n = any nucleotide
209 <400> SEQUENCE: 15
W--> 210 nnnccuguuu uuacu 15
213 <210> SEQ ID NO: 16
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215 <212> TYPE: RNA
216 <213> ORGANISM: Artificial Sequence
218 <220> FEATURE:
219 <223> OTHER INFORMATION: Description of Artificial Sequence: Modified
220     influenza A 3'-sequence (pHL1104 and pHL1920)
222 <220> FEATURE:
223 <221> NAME/KEY: misc_feature
224 <222> LOCATION: (1)..(3)
225 <223> OTHER INFORMATION: n = any nucleotide
227 <400> SEQUENCE: 16
W--> 228 nnnccuguuu cuacu 15
231 <210> SEQ ID NO: 17
232 <211> LENGTH: 15
233 <212> TYPE: RNA
234 <213> ORGANISM: Artificial Sequence
236 <220> FEATURE:
237 <223> OTHER INFORMATION: Description of Artificial Sequence: Modified
238     influenza A 3'-sequence (pHL1948)
240 <220> FEATURE:
241 <221> NAME/KEY: misc_feature
242 <222> LOCATION: (1)..(3)
243 <223> OTHER INFORMATION: n = any nucleotide
245 <400> SEQUENCE: 17
W--> 246 nnnccugguu cuccu 15
249 <210> SEQ ID NO: 18
250 <211> LENGTH: 15
251 <212> TYPE: RNA
252 <213> ORGANISM: Artificial Sequence
254 <220> FEATURE:
255 <223> OTHER INFORMATION: Description of Artificial Sequence: Modified
256     influenza B 3' sequence
258 <220> FEATURE:
259 <221> NAME/KEY: misc_feature
260 <222> LOCATION: (1)..(5)
261 <223> OTHER INFORMATION: n = any nucleotide
263 <400> SEQUENCE: 18
W--> 264 nnnnnyguuu cuacu 15
267 <210> SEQ ID NO: 19
268 <211> LENGTH: 14
269 <212> TYPE: RNA
270 <213> ORGANISM: Artificial Sequence
272 <220> FEATURE:
273 <223> OTHER INFORMATION: Description of Artificial Sequence: Modified
274     influenza C 3'-sequence

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276 <400> SEQUENCE: 19
277 ccccguguuuc uacu. 14
280 <210> SEQ ID NO: 20
281 <211> LENGTH: 10
282 <212> TYPE: DNA
283 <213> ORGANISM: Influenza A virus
285 <400> SEQUENCE: 20
286 aggtacgttc 10
289 <210> SEQ ID NO: 21
290 <211> LENGTH: 32
291 <212> TYPE: DNA
292 <213> ORGANISM: Influenza A virus
294 <400> SEQUENCE: 21
295 gctgaaaaat gatcttcttg aaaattgcag gc 32
298 <210> SEQ ID NO: 22
299 <211> LENGTH: 5169
300 <212> TYPE: DNA
301 <213> ORGANISM: Artificial Sequence
303 <220> FEATURE:
304 <223> OTHER INFORMATION: Description of Artificial Sequence: FPV-Bratislava-PB1
306 <220> FEATURE:
307 <221> NAME/KEY: CDS
308 <222> LOCATION: (191)..(2461)
310 <400> SEQUENCE: 22
311 ccccaaaaaa aaaaaaaa aagagtccag agtggccccg ccgctccgcg ccgggggggg 60
313 gggggggggg ggacactttc ggacatctgg tcgacctcca gcatcggggg aaaaaaaaaa 120
315 acaaagtgtc gcccgagta ctggtcgacc tccgaagttg ggggggagcg aaagcaggca 180
317 aaccatttga atg gat gtc aat ccg act tta ctg ttc ttg aaa gtt cct 229
318 Met Asp Val Asn Pro Thr Leu Leu Phe Leu Lys Val Pro
319 1 5 10
321 gcg caa aat gca ata agt act acg ttc cct tac act gga gat cct cca 277
322 Ala Gln Asn Ala Ile Ser Thr Thr Phe Pro Tyr Thr Gly Asp Pro Pro
323 15 20 25
325 tac agc cat gga aca ggg aca gga tac acc atg gac aca gtc aac agg 325
326 Tyr Ser His Gly Thr Gly Thr Gly Tyr Thr Met Asp Thr Val Asn Arg
327 30 35 40 45
329 aca cac caa tat tcg gaa aag ggg aaa tgg aca aca aac act gag act 373
330 Thr His Gln Tyr Ser Glu Lys Gly Lys Trp Thr Thr Asn Thr Glu Thr
331 50 55 60
333 gga gca ccc caa ctt aat cca att gat ggc cca ttg cct gag gac aat 421
334 Gly Ala Pro Gln Leu Asn Pro Ile Asp Gly Pro Leu Pro Glu Asp Asn
335 65 70 75
337 gaa cca agt gga tat gca caa aca gac tgc gtc ctg gaa gca atg gct 469
338 Glu Pro Ser Gly Tyr Ala Gln Thr Asp Cys Val Leu Glu Ala Met Ala
339 80 85 90
341 ttc ctt gaa gaa tcc cat cca gga atc ttt gaa aac tcg tgt ctt gag 517
342 Phe Leu Glu Glu Ser His Pro Gly Ile Phe Glu Asn Ser Cys Leu Glu
343 95 100 105
345 acg atg gaa gtt gtt caa caa aca aga gtg gac aaa ctg acc caa ggc 565

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VERIFICATION SUMMARY

PATENT APPLICATION: US/10/073,377

DATE: 03/01/2002

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Input Set : A:\EP.txt

Output Set: N:\CRF3\03012002\J073377.raw

L:11 M:270 C: Current Application Number differs, Replaced Application Number
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:39 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:110 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:147 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:165 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12
L:179 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:210 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
L:228 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
L:246 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17
L:264 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18
L:604 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:1059 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:1513 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:1968 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:2423 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:2877 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:3333 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:3788 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:4242 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:4697 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:5153 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:5608 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:6062 M:258 W: Mandatory Feature missing, <220> FEATURE: